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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Muneki Ando

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12/30/2005

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EXAMINER

ABDULSELAM, ABBAS I

ART UNIT

PAPER NUMBER

2677

DATE MAILED: 12/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	09/484,432		ANDO ET AL.	
	Examiner		Art Unit	
	Abbas I. Abdulsalam		2677	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 71-77 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 71-75 is/are rejected.
- 7) ☒ Claim(s) 76 and 77 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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Response to Arguments

1. Applicant's arguments with respect to claims 71-77 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 71-75 are rejected under 35 U.S.C. 103(a) as being obvious over Sakuragi et al. (USPN 6195076) in view of Naoto et al. (Japanese publication # 09-265925).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance

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with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Regarding claim 71, Sakuragi teaches a display apparatus comprising a plurality of column wirings each connected to a respective display device; at least one row wiring, connected to said display devices (col. 9, lines 39-48 and Fig. 1); and a respective pulse width modulator provided for each column wiring for outputting, for each column wiring, a modulation signal (col. 13, lines 60-67 and Fig. 7 (8)).

Sakuragi does not specifically teach, “ the modulation signal being corrected such that an effect on luminance in relation to the modulation signal, of deforming the waveform of the modulation signal as a result of a level change of the modulation signal supplied to the adjacent column wiring is inhibited”.

However, Sakuragi as shown in Fig. 22 teaches that although a cold cathode type electron-emitting device has a characteristic of fast response, since the current waveform has a long rise time, the resulting waveform of the emission current $I_{sub.e}$ is deformed (col. 5, lines 63-67), and as a solution to the problem, Sakuragi teaches a display apparatus which has no luminance unevenness, realizes superior linearity of a grayscale and has a characteristic of quick response (col. 6, lines 66-67, col. 7, lines 1-2 and Fig.

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18). Sakuragi also teaches that a light emission luminance in a display apparatus could be controlled by the pulse-width modulating method (col. 6, lines 45-50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize Sakuragi's technique of avoiding luminance unevenness inside a circuit diagram of Fig. 7 for the purpose of attaining practical light emission luminance in a display apparatus.

Sakuragi does not teach a cross-talk correction arrangement, which controls operation of the pulse width modulator for a predetermined one of the column wirings such that the modulation signal applicable to a column wiring is corrected to inhibit an effect on luminance.

Naoto on the other hand teaches a stripe-like intermediate electrode (5), which is arranged in parallel with scanning wirings (3) such that the intermediate electrode (5) is scanned simultaneously with scanning wirings (3), and the intermediate electrode are equipped with openings GH opposite to the elements (2) so that only electrons emitted by the scanned elements reach a fluorescent plate.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Sakuragi's display system to adapt Abe's intermediate electrode (5) as illustrated and configured in the abstract because the use of an intermediate electrode (5) helps avoid an occurrence of cross talk in an image display device as taught by Naoto (see the abstract).

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Regarding claim 72, Sakuragi teaches each of said display devices comprises an electron-emitting device (col. 1, lines 40-57).

Regarding claim 73, Sakuragi teaches said pulse width modulators each supply a constant current for driving a respective one of said display devices (col. 5, lines 45-50).

Regarding claim 74, Sakuragi teaches said modulation signal being supplied to the adjacent wiring is tuned off prior to turning off the modulation signal from the predetermined pulse width modulator, the modulation signal is corrected to have a longer pulse width (col. 13, lines 8-18, Fig. 5B and Fig. 5F).

Regarding claim 75, Sakuragi teaches when the modulation signal supplied to the adjacent wiring is tuned on following to turning on of the modulation signal from the predetermine pulse width modulator, the modulator signal is corrected to have a shorter pulse width (col. 13, lines 8-18, Fig. 5B and Fig. 5F).

Allowable Subject Matter

3. Claims 76-77 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abbas I Abdulsalam whose telephone number is (571)272-7685. The examiner can normally be reached on Monday through Friday from 9:00 A.M. to 5:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you

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have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Abbas Abdulsalam

Examiner

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December 21, 2005

AMR A. AWAD
PRIMARY EXAMINER
Amr Awad